



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/532,050	03/21/2000	Danny M. Nessett	922-88	6821

7590 02/03/2004

Larry S Nixon
Nixon & Vanderhye PC
1100 North Glebe Road 8th Floor
Arlington, VA 22201-4714

EXAMINER

SIMITOSKI, MICHAEL J

ART UNIT	PAPER NUMBER
----------	--------------

2134

DATE MAILED: 02/03/2004

2

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/532,050

Applicant(s)

NESSETT ET AL.

Examiner

Michael J Simitoski

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-6 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

NORMAN M. WRIGHT
PRIMARY EXAMINER

DETAILED ACTION

1. Claims 1-6 are pending.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the step (d) in claim 1 (sending a communication from the device to the management system) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:
 - a. On page 4, line 8, "There various" should be replaced with "There are various".Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 5 & 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over “Authentication for DHCP Messages” (INTERNET DRAFT) by Arbaugh et al. (Arbaugh) in view of U.S. Patent 5,708,780 to Levergood et al. (Levergood), in further view of Applied Cryptography, Second Edition by Schneier.

Regarding claim 1, Arbaugh discloses communicating identification information/client-id of the device/host/client to a management system/server (see page 12, Appendix A), installing a device/host (see page 1, Abstract), obtaining from a protocol address administrator/server a protocol address/IP address for said device/host (see page 1, §1), sending a communication/(client identifier, subnet address) from the device/client to the management system/server (see page 12, Appendix A), conducting a key agreement protocol exchange/generation between said device/client and said management system/server to establish a set of encryption keys/ K (see page 6, §5.4 & page 12, Appendix A) and using said set of encryption keys to provide authentication by said device/client and said management system/server (see page 6, §5.4 & pages 8-9, §6), associating, within the management system/server, said identification information/client identifier and the protocol address/subnet address of the device and communicating from said management system/server to said administrator/server a message including said identification information and said protocol address (see page 12, Appendix A). Note that, as the reference teaches a server which acts as both the management system and administrator, it is inherent that the associated information is sent from the management system to the administrator. Arbaugh lacks associating the time with the identification information and protocol address. However, Levergood teaches a server that controls and monitors access (see col. 3, lines 1-43), that logs access attempts with information

such as client IP address, current time and URL, which contains the user identifier (see col. 6, lines 50-67 & col. 8, lines 1-13) to be able to determine the frequency of accesses to a server (see col. 8, lines 14-26). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to associate the transaction time, protocol address and identification information in the management system. One of ordinary skill in the art would have been motivated to perform such a modification to be able to determine the frequency of access attempts, as taught by Levergood (see col. 3, lines 1-43, col. 6, lines 50-67 & col. 8, lines 1-26). Arbaugh, as modified above, lacks mutual authentication and lacks sending a communication from the device to the management system (step d). However, Schneier teaches that authentication using public key cryptography is useful when Alice/client does not trust the host/server (see page 54), and hence, both parties want to authenticate each other. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to perform mutual authentication between the device/client and management system/server. One of ordinary skill in the art would have been motivated to perform such a modification to allow both entities to trust each other, as taught by Schneier (see page 54).

Regarding claims 5 & 6, Arbaugh lacks a revealed encryption key and a manufactured encryption key related to the revealed encryption key. However, Schneier teaches that authentication using public key cryptography, using a private and public key pair, is useful when Alice/client does not trust the host/server (see page 54). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to perform mutual authentication between the device/client and management system/server and to send a revealed/public encryption key which is related to a key/manufactured encryption key stored in

Art Unit: 2134

the device. One of ordinary skill in the art would have been motivated to perform such a modification to allow both entities to trust each other, as taught by Schneier (see page 54).

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arbaugh in view of Levergood and Schneier, as applied to claim 1, in further view of U.S. Patent 6,393,565 to Lockhart et al. (Lockhart). Arbaugh, as modified above, lacks producing further encryption keys for subsequent communications between said management system and said device. However, Lockhart teaches that it is known in the art to generate additional keys to protect a system should a key compromise occur (see col. 1, lines 13-34). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to produce further encryption keys for subsequent communications between said management system and said device. One of ordinary skill in the art would have been motivated to perform such a modification because it is known to generate additional keys, possible to protect a system in the event of key compromise, as taught by Lockhart (see col. 1, lines 13-34).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arbaugh in view of Levergood and Schneier, as applied to claim 1, in further view of U.S. Patent 6,058,420 to Davies. Arbaugh, as modified above, lacks periodically sweeping through all addresses available to said management system and comparing said addresses with addresses of devices compiled by means of step f. However, Davies teaches a network monitoring architecture that polls IP addresses (col. 14, lines 8-25) and compares the responses to a list of polled addresses/interfaces (see col. 11, lines 47-65), gaining multiple of advantages such as

Art Unit: 2134

extensibility, parallel capabilities and optimized efficiency (see col. 4, lines 12-42). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to periodically sweep through all addresses available to said management system and compare said addresses with addresses of devices compiled by means of step (f). One of ordinary skill in the art would have been motivated to perform such a modification to gain the benefits of extensibility, parallel capabilities and optimized efficiency, as taught by Davies (see col. 4, lines 12-42, col. 11, lines 47-65 & col. 14, lines 8-25).

Allowable Subject Matter

8. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 3, the prior art relied upon fails to teach sending a device a reset key enabling reiteration of a key agreement protocol exchange corresponding to step (e).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Simitoski whose telephone number is (703)305-8191. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:30 p.m.. The examiner can also be reached on alternate Fridays from 8:00 a.m. – 4:30 p.m.

Art Unit: 2134

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (703)308-4789.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, DC 20231

Or faxed to:

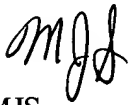
(703)746-7239 (for formal communications intended for entry)

Or:

(703)746-7240 (for informal or draft communications, please label "PROPOSED" or "DRAFT")


Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA 22202, Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9000.



MJS

12 January 2004



1/12/04
NORMAN M. WRIGHT
PRIMARY EXAMINER